

What is claimed is:

1. A master production scheduling management system for generating master production schedules (MPSs), comprising:
  - at least one client computer;
  - a database server;

an MPS management server, comprising:

  - a data retrieving module for obtaining data from one or more external information systems;
  - an MPS generating module for generating an original MPS, and for amending the original MPS to be an optimized MPS by simulating rough-cut capacity planning (RCCP) and material requirements planning (MRP);
  - a simulating module for simulating RCCP and MRP based on the original MPS; and
  - a weekly scheduling module for generating weekly production schedules based on the optimized MPS; and

a network interconnecting the at least one client computer, the database server and the MPS management server.
2. The master production scheduling management system as claimed in claim 1, wherein the external information systems comprise a purchase order information system, an inventory information system, and a manufacturing order information system.
3. The master production scheduling management system as claimed in claim 1, wherein the simulating module comprises:
  - a simulation mode selecting sub-module for selecting one of simulation modes for performing simulation, the simulation modes comprising an RCCP simulation mode and an MRP simulation mode;
  - an RCCP simulating sub-module for simulating the original MPS in the RCCP

simulation mode;

an MRP simulating sub-module for simulating the original MPS in the MRP simulation mode; and

a simulation report generating sub-module for generating one or more simulation reports based on simulation results generated by the RCCP simulating sub-module and the MRP simulating sub-module.

4. The master production scheduling management system as claimed in claim 1, wherein the MPS management server further comprises a data maintaining module for performing maintenance of basic data, the basic data comprising sales forecast data, an enterprise's calendar, and parameters of material codes in an MPS.

5. A master production scheduling management method for generating master production schedules, the method comprising the steps of:

- (a) retrieving relevant data from one or more external information systems, the retrieved data comprising up-to-date data on purchase orders, data on sales forecasts, inventory data and data on manufacturing orders;
- (b) generating an original master production schedule (MPS) based on the retrieved data;
- (c) simulating rough-cut capacity planning (RCCP) and material requirements planning (MRP); and
- (d) generating an optimized MPS.

6. The master production scheduling management method as claimed in claim 5, further comprising the following steps after step (c):

determining whether there are one or more contingencies that require rescheduling of the original MPS according to simulation results; and

amending the original MPS if there are any said contingencies.

7. The master production scheduling management method as claimed in claim 6, wherein said contingencies comprise insufficient production capacity of one or

more workstations, and one or more production materials in shortage.

8. A method of generating a weekly production schedule comprising sequential steps of:

- (a) selecting a master production schedule and setting a corresponding schedule rule;
- (b) generating weekly production schedules;
- (c) amending said weekly production schedule if said weekly production schedules are inaccurate, and returning to step (b);
- (d) amending said weekly production schedules if said weekly production schedules are accurate while there are contingencies requiring rescheduling, and returning to step (b); and
- (e) finalizing said weekly production schedules if said weekly production weekly schedules are accurate and no contingencies require rescheduling with regard to said weekly production schedules.